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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,399	09/16/2003	Hsiung Ming Shiu	CP3017-AMP06513	9676
46701	7590	02/03/2005	EXAMINER	
HSIUNG MING SHIU 235 CHUNG-HO BOX 8-24 TAIPEI HSIEN, TAIWAN			VORTMAN, ANATOLY	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/662,399

Applicant(s)

SHIU, HSIUNG MING

Examiner

Anatoly Vortman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because of the following informalities: Claim recites the “base” in the last line of the claim. In order to provide proper antecedent basis, the “base” should be replaced with “substrate”. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by either US/5,661,902 to Katchmar, US/2002/0084524 to Roh et al., (Roh), or by JP/4-273,465 to Nagaoka.

Katchmar disclosed (Fig. 13) a heat dissipating device with heat conductive posts comprising: a substrate (122); a lower portion of the substrate (122) being formed with a plurality of via holes ; a plurality of heat conductive posts; the heat conductive posts being axially embedded into the via holes (via holes and conductive posts embedded in said via holes do not have reference numbers, but can be clearly seen on the figure) of the substrate (122) and a plurality of heat dissipating fins (140) on one surface of the base (122).

Alternatively, Roh disclosed (Fig. 2) a heat dissipating device with heat conductive posts comprising: a substrate (20); a lower portion of the substrate (20) being formed with a plurality of via holes (41, 43) ; a plurality of heat conductive posts (can be seen as filling said via holes); the heat conductive posts being axially embedded into the via holes (41, 43) (column 33, lines 37+) of the substrate (20) and a plurality of heat dissipating fins (70) on one surface of the base (20).

And yet alternatively, Nagaoka disclosed (Fig. 2) a heat dissipating device with heat conductive posts comprising: a substrate (10); a lower portion of the substrate (10) being formed with a plurality of via holes (14) ; a plurality of heat conductive posts (15); the heat conductive posts (15) being axially embedded into the via holes (14) of the substrate (10) and a plurality of heat dissipating fins (12) on one surface of the base (10).

4. Regarding claims 2-5, the claims recite the manufacturing process (i.e. method of forming) for the heat dissipating device. Please note, that the method of forming the device is not germane to the issue of patentability of the device itself. Even though the claims are limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). Therefore, the claims have not been given patentable weight.

### ***Conclusion***

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5. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

US/2004/0036161, 2002/0105079, 5660917, 6046498, 6143590, 6188582, 6758263, 6770967, 6774482, 6791183, and 5844310 disclosed cooling arrangements for electronic devices comprising heat sinks with fins, thermally conductive via holes, and/or heat sinks with embedded highly thermally conductive elements.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Lynn Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anatoly Vortman  
Primary Examiner  
Art Unit 2835

AV

